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September 19, 2016

*Via Electronic Filing*

Marlene H. Dortch, Secretary  
Federal Communications Commission  
445 Twelfth Street, SW  
Washington, DC 20554

Re: Written *Ex Parte* Filing, *Terrestrial Use of the 2473-2495 MHz Band for Low-Power Mobile Broadband Networks*, IB Docket No. 13-213

Dear Ms. Dortch:

This responds to various recent *ex parte* filings in the above-captioned proceeding.<sup>1</sup> More specifically, this responds to individual filings made by Microsoft and Public Knowledge, and joint filings made by two groups consisting of: Entertainment Software Association, Microsoft Corp. Nintendo of America, Inc., Sony Electronics, Inc. and Sony Interactive Entertainment America, LLC

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<sup>1</sup> As with each of my prior filings in this proceeding, these comments are offered for the Commission's review and represent the personal views and opinions of the undersigned counsel. This letter does not represent the views of undersigned counsel's firm, or any of its clients, or necessarily any particular stakeholder or party in this proceeding.

Marlene Dortch  
September 19, 2016

(collectively “ESA”); and the Hearing Industries Association and Entertainment Software Association (collectively “HIA/ESA”).<sup>2</sup>

### **The Microsoft Test Results**

As I have stated before on the record, in its NPRM adopted almost 3 years ago, the Commission urged the opposition to present technical evidence of the “concerns” they stated during the initial petition process. Prior to the most recent filing by Microsoft, the only testing results reported into the record by opposition were either presented through Wi-Fi Alliance (WFA) as a result of testing facilitated by Globalstar and the FCC at OET facilities (“FCC Demo”), or by Bluetooth SIG stemming from the FCC Demo, or by hedge fund managers.<sup>3</sup>

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<sup>2</sup> See Letters from: Andrew Bopp, Executive Director (HIA) and Michael Warnecke, Chief Counsel, Technology Policy (ESA), to Marlene Dortch, Secretary, FCC (9/1/16); Paula Boyd, Director, Govt. Relations and Regulatory Affairs and Michael Daum, Technology Policy Strategist, Microsoft, to Marlene Dortch, Secretary, FCC (9/12/16); Harold Feld, Senior Vice President, Public Knowledge, to Marlene Dortch, Secretary, FCC (9/15/16); and Michael Warnecke, Chief Counsel, Technology Policy, ESA to Marlene Dortch, Secretary, FCC (9/15/16), *IB Docket No. 13-213*.

<sup>3</sup> Not that this is directly relevant to the value of any particular test results submitted by a hedge fund manager, but it cannot and should not go unnoticed that one particular hedge fund manager, who submitted technical reports in this proceeding and met with several senior FCC staff, was arrested last month after crashing his car into another car in the Hamptons. His arrest related to DUI and cocaine possession according to several reports. See <http://mobile.easthamptonstar.com/News/2016818/Two-Are-Hurt-Crash>. I can only assume that the FCC, for substantive reasons, gave no weight to the technical reports filed by this individual, but being that the FCC does not comment on pending proceedings and, further, that actual industry stakeholder filings publicly relied on this hedge fund manager’s opinion, it would seem to at least bear mention. In this latter regard, see Letter from Michael Calabrese, Director, Wireless Future Project, Open Technology Institute, and Steven E. Coran, Counsel for WISPA, to Marlene Dortch, Secretary, FCC (1/8/15), at footnote 1; Letter from Michael Calabrese, Director, Wireless Future Project, Open Technology Institute, to Marlene Dortch, Secretary, FCC (2/13/15), at footnote 1; and Letter from Michael Calabrese, Director, Wireless Future Project, Open Technology Institute,

Notably, WFA and Bluetooth SIG made various complaints about the FCC Demo, such as by citing alleged “short notice,” “insufficient testing time,” “[a] small and crowded test facility,” “constrained circumstances,” and an “uncontrolled RF environment.”<sup>4</sup> Of course, this latter complaint of an “uncontrolled RF environment” contradicts the other repeated complaints about an alleged lack of “real world” testing, because the real world of unlicensed Wi-Fi or Bluetooth operations is usually quite uncontrolled. And, in all of this time, WFA, Bluetooth SIG and other industry stakeholders have presented no independent test results of their own even though they certainly have the technical expertise to design and conduct tests to overcome all of the “constraints” allegedly placed on them at the FCC Demo. That was the case until now when Microsoft secured an STA and then conducted shielded chamber tests that, to my knowledge, do not even require an STA or experimental license. I do commend Microsoft for finally taking at least a little time to do some testing of its own (or, perhaps more accurately, publicly reporting a small portion of its past test results). I do not know if Globalstar will have its own technical experts review and critique the latest Microsoft filing, but I suspect that if they do, the Globalstar technical experts may make some of the observations and ask some of the questions that immediately arose in my mind, such as:

1. Why did Microsoft focus its very first test in the record of this long proceeding on “worst case scenario” conditions?
2. When Microsoft complained in previous filings that Globalstar failed to test “real world” conditions, or that Globalstar’s testing or demonstrations were not “rigorous,” was it this type of “worst case scenario” that Microsoft had in mind as “real world” and “rigorous?” Were the test room conditions and equipment, as shown and described in Microsoft’s very first testing report, what Microsoft had in mind for “rigorous” testing? Was Microsoft part of the WFA and/or Bluetooth

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and Harold Feld, Senior Vice President, Public Knowledge, to Marlene Dortch, Secretary, FCC (2/18/15), at footnote 1, *IB Docket No. 13-213*.

<sup>4</sup> See filing by Mark Powell, Executive Director, Bluetooth SIG, Inc. (3/12/15), and Letter from Rob Alderfer, Principal Strategist, CableLabs, to Marlene Dortch, Secretary, FCC (4/14/15), *IB Docket No. 13-213*.

SIG group that complained about the so-called “constrained” FCC Demo conditions? Did the FCC reject Microsoft’s indirect request for “worst case scenario” testing at the FCC Demo?<sup>5</sup>

3. The FCC, through its Technical Advisory Council, has been transitioning to a risk informed analysis of interference conditions and away from “worst case scenario” analysis, in order to accommodate further and more efficient spectrum use. Why is Microsoft clinging to the past instead of adapting both its technology and its interference analytics to the needs of a more spectrally efficient environment?<sup>6</sup>
4. Microsoft tested its legacy “Xbox 360S” system that is being phased out of existence. Why didn’t Microsoft report on testing its latest “Xbox One” technology?
5. Microsoft Xbox users have experienced technical problems referred to by gamers as “input lag,” “controller lag” and “controller delay” for over a decade. Why did Microsoft not mention the history of this problem, as well its own suggestions to Xbox customers for resolving these longstanding issues, in their recent report to the Commission? Why did

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<sup>5</sup> See, for example, Letter from Paula Boyd, Director, Govt. Relations and Regulatory Affairs and Michael Daum, Technology Policy Strategist, Microsoft, to Marlene Dortch, Secretary, FCC (5/25/15), (“Based on these and other concerns, Microsoft has concluded that the Globalstar demonstration was just that—a limited and controlled demonstration of TLPS that produced some interesting tidbits of data—but nothing that the Commission should consider as a substitute for rigorous testing.”), citing Letter from Greg Gerst, Gerst Capital, LLC, to Marlene H. Dortch, Secretary, FCC, IB Docket No. 13-213, RM-11685 (filed May 19, 2015), *IB Docket No. 13-213*.

<sup>6</sup> See, for example:

<https://transition.fcc.gov/bureaus/oet/tac/tacdocs/meeting4115/Intro-to-RIA-v100.pdf>

<https://transition.fcc.gov/bureaus/oet/tac/tacdocs/meeting121015/MetSat-LTE-v100-TAC-risk-assessment.pdf>

Microsoft reframe the issue as so-called “button loss” for purposes of its test report in this proceeding?<sup>7</sup>

6. In its recent letter reporting shielded, worst case scenario testing, Microsoft tells the FCC to stay tuned for real world testing. After almost three years from the date of the Commission’s request for technical evidence, why is Microsoft continuing to keep the Commission “on the hook” for relevant evidence? How long is the FCC going to wait for the “smoking gun?”
7. If the test set up conducted and reported on by Microsoft was not “real world,” exactly what does its report add to the discussion? What will the “real world” consist of in Microsoft’s opinion when it comes to these action video games? Perhaps the “real world” will consist of a dorm room suite in which eight “gamers” are simultaneously playing “Halo,” “Call of Duty,” and “Grand Theft Auto” while Channels 1, 6, 11 and 14 are fully loaded. Perhaps a microwave oven will be used as shelf for the game consoles and will be cooking frozen lasagna for the group. This example may not be an exaggeration of what could be found in a few college dorm rooms today. Being that one need not walk from room to room while using their wireless Xbox controller, perhaps the first solution pursued in the case of “serious” action gaming being hampered by “controller delay,” “input lag,” “controller lag,” or “button loss” is to simply use wired connections between the user controllers and the control console.
8. What is the definition of illegal interference in the context of action video games, for example, in a “real world” dorm room situation? Is it that one or more of the gamers cannot shoot or otherwise destroy a virtual enemy fast enough due to “controller lag,” “controller delay,” or so-called “button loss?” Does the policy of allowing faster virtual destruction of enemies outweigh the policy of helping multiple classes of students at an

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<sup>7</sup> See, for example:

[http://forums.xbox.com/xbox\\_support/xbox\\_360\\_support/f/8/t/315964.aspx](http://forums.xbox.com/xbox_support/xbox_360_support/f/8/t/315964.aspx)

anchor institution such as The Washington School for Girls simultaneously take standardized tests?

9. If TLPS, as continuously in use at The Washington School for Girls, is not “real world,” then what is a better representation?
10. What level of testing is required for purposes of Part 15 interference standards?

### **The ESA Meetings and Ex Parte**

On September 13, 2016, nine members of the action video game industry or their representatives, met with Commissioner O’Rielly and his Legal Advisor, Erin McGrath. A subgroup met with senior staff including Edward Smith, Johanna Thomas and Julius Knapp. I can only surmise that, in accordance with Commissioner’s O’Rielly’s many public comments regarding the limitations of such meetings, these nine individuals essentially restated many of the points raised in the Microsoft report of its test results. FCC personnel were not permitted to tell the parties whether any merit was found in their arguments, nor could FCC tell them whether their “concerns” about interference were even an issue at this point in the proceeding. On the record, the Chairman has stated that the draft Report and Order has taken these “concerns” into account with appropriate safeguards.<sup>8</sup> Regardless of whether nine individuals appear at FCC headquarters in an effort to spin the actual record into something it is not, or to strong arm a Commissioner by force of numbers, it is hard to believe that the FCC’s technical experts would change their minds based on the recent submission by Microsoft. Moreover, it is long past time to cut off the incessant delays and “testing Hell” being condoned in what is essentially a proceeding based on Part 15 interference standards.

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<sup>8</sup> Letter from Chairman Wheeler to Hon. Mike Thompson (7/27/16), (“[T]he draft Report and Order that I circulated included numerous conditions to help ensure that deployment of Globalstar’s terrestrial Wi-Fi network would not have a significant detrimental impact on Bluetooth or other spectrum users.”), *IB Docket No. 13-213*.

### **The Public Knowledge Meeting and Ex Parte**

On September 12, 2016, representatives of Public Knowledge met with Jon Wilkins, Chief of the Wireless Telecommunications Bureau and Brian Regan, Associate Bureau Chief, regarding many proceedings. One of those proceedings was the present one, in which Public Knowledge continued to express “conditional” support. This confirms that Public Knowledge has, in fact, distanced itself from what amounts to be a new “socialized” spectrum policy demanded most recently by New America’s Open Technology Institute (“OTI”). In accordance with OTI’s most recent idea, a licensee would actually lose its licensed spectrum rights to public use despite billions in investment to secure and retain that license. While Public Knowledge did not directly address its former joint commenter in this proceeding, it is heartening to see that Public Knowledge is no longer a part of the shifting sands in this proceeding.

However, the Commission should take issue with Public Knowledge’s apparent view that MSS licensees are less justified in pursuing ATC based terrestrial rights because the associated MSS license was not obtained at “auction.” Globalstar’s MSS license did not come for “free.” A *quid pro quo* process for obtaining a spectrum license does not have to involve the licensee cutting a check to the U.S. Treasury. Sometimes, in return for the provision of services under the license, and perhaps most especially services that promote and protect national security interests and public safety, the government grants spectrum rights in return for demonstrated investment and continuous operations of such services. That is the case with MSS. MSS is a business that is neither easy nor a “no brainer” cash generator like a popular search engine may be, or even a popular action video game having many avid or even addicted users.<sup>9</sup>

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<sup>9</sup> The effects of video game and other forms of “digital” addiction have been the subject of scientific study and are becoming a real problem for the country. See, for example:

<http://nypost.com/2016/08/27/its-digital-heroin-how-screens-turn-kids-into-psychotic-junkies/>

<http://www.video-game-addiction.org/>

<http://www.webmd.com/mental-health/addiction/features/video-game-addiction-no-fun>

Instead, as most vividly shown by the recent launch pad explosion of a SpaceX rocket, MSS is a business fraught with very expensive and ever present risk related to space operations. Iridium, which is a competitor of Globalstar, will now be even further delayed in the launch of its “Next” generation of satellites because of the recent SpaceX rocket explosion. Globalstar faced similar delays in launching its second generation of satellites. So, suggesting that granting terrestrial rights to an MSS licensee equates to a “windfall” either amounts to uniformed opinion or intellectual dishonesty. In fact, Globalstar took on significant risk, overcame significant barriers to entry into the MSS market, and invested billions over the past two decades in order to secure and support its MSS license.

On the other hand, sometimes the government grants “free” spectrum rights that can then be monetized by giant technology companies, cable companies and the like with very high profit margins relative to the price paid for those spectrum rights. The Wi-Fi that my family uses from the access point in our kitchen did not come for “free.” Instead, we pay a healthy monthly fee to a cable company for the service. Likewise, I pay for Wi-Fi at the local coffee shop by handing over \$4.00 for a cup of coffee, and I pay for Wi-Fi in my hotel room by way of ever increasing room rates. The price paid to keep further competition from monetizing that “free” spectrum is miniscule to such giant technology companies, cable companies and unlicensed industry groups. That “price” is simply the cost of lawyers, lobbyists and executives or other employees necessary to squash smaller competition having much less leverage with the highest levels of government operations. This is what is happening with regard to Globalstar, at least as far as an outsider such as myself can perceive from the public record. While I disagree with the position of Public Knowledge insofar as it justifies its “conditional support” on the inaccurate spin associated with Globalstar’s MSS license, I do appreciate that Public Knowledge’s position is intended to move the proceeding forward while also protecting the legitimate licensed rights of Globalstar.

### **The HIA/ESA Ex Parte**

In their letter dated September 1, 2016, HIA/ESA stated:

Globalstar, Inc. (“Globalstar”) has recently suggested that the answer to resolving the widespread concerns regarding its proposed Channel 14 service is for the Commission to permit additional Channel 14 operations



by other parties. We write today to reiterate that Globalstar's original terrestrial low power service ("TLPS") proposal would disrupt Bluetooth-dependent consumers, and to emphasize that the company's new, more expansive proposal would be even worse.

There have been various intellectually dishonest statements by opposition in this record, but this one ranks as one of the most blatant. In fact, the idea of permitting additional Channel 14 operations by other parties was first suggested by opposing parties, such as OTI, Public Knowledge, Bluetooth SIG and Google. For example, in 2015, Google stated: "Given the extreme congestion of currently available 2.4 GHz spectrum, unlocking Wi-Fi use across the entirety of the band would contribute materially to the national wireless economy and be a major achievement for the Commission."<sup>10</sup> For HIA/ESA at this late stage to suggest that it is GSAT pushing for public use of Channel 14 belies reality. For the four years that this proceeding has been pending, Globalstar has simply endeavored to move an NPRM toward adoption for purposes of providing additional broadband capacity to the nation, and lately, at least as far as one can tell from the record, it seems that the shifting position of the Commission has required Globalstar's agreement to "public interest" conditions. Surely, HIA/ESA and other third parties interjecting in this proceeding have noticed such conditions being imposed in recent proceedings such as the AT&T/DirectTV and Charter/Time Warner/Bright House transactions.<sup>11</sup> This proceeding appears to be no different.

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<sup>10</sup> Letter from Austin C. Schlick, Director, Communications Law, Google, Inc., to Marlene Dortch, Secretary, FCC (10/10/15), *IB Docket No. 13-213*.

<sup>11</sup> *See*:

[https://apps.fcc.gov/edocs\\_public/attachmatch/FCC-15-94A1.pdf](https://apps.fcc.gov/edocs_public/attachmatch/FCC-15-94A1.pdf)  
[https://transition.fcc.gov/Daily\\_Releases/Daily\\_Business/2016/db0510/FCC-16-59A1.pdf](https://transition.fcc.gov/Daily_Releases/Daily_Business/2016/db0510/FCC-16-59A1.pdf)

Marlene Dortch  
September 19, 2016

## **Conclusion**

None of the recent submissions by third parties, including those discussed herein, should alter the Commission's course in this proceeding to adopt its proposed rules in an expeditious fashion. The Commission should be ready to adopt and release a Report and Order that strikes the appropriate balance of safeguarding incumbents and providing further broadband capacity for the nation.

Pursuant to section 1.1206(b)(2) of the Commission's rules, 47 C.F.R. § 1.1206(b)(2), this *ex parte* notification is being filed electronically for inclusion in the public record of the above-referenced proceeding.

Respectfully submitted,

*/s/ Kevin G. Rooney*

Kevin G. Rooney

cc (via e-mail only):      Hon. Tom Wheeler, Chairman  
                                 Hon. Mignon Clyburn  
                                 Hon. Jessica Rosenworcel  
                                 Hon. Ajit Pai  
                                 Hon. Michael O'Rielly